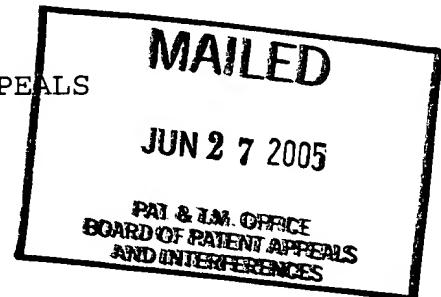


The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIDEYA TAKEO



Appeal No. 2005-0751
Application No. 09/356,505

ON BRIEF

Before RUGGIERO, LEVY, and SAADAT, Administrative Patent Judges.
RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-30, which are all of the claims pending in the present application. An amendment filed March 4, 2003 after final rejection was approved for entry by the Examiner.

The disclosed invention relates to data compression in which original image data is wavelet-transformed, classification is performed, and a bit allocation is determined. Based on the determined bit allocation, quantized data items are obtained from the wavelet-transformed data, and the quantized data items are

classified into zero data, non-zero data, and classification information data related to the classification. A comparatively simple coding method, such as Huffman coding and run-length coding, is performed on the classification information data, while a comparatively complex coding method, such as universal coding and Golomb-Rice coding is performed on the non-zero data.

Claim 1 is illustrative of the invention and reads as follows:

1. A data compression method of obtaining compressed coded data by quantization of original data to obtain quantized data followed by coding and compression of the quantized data, the data compression method comprising the steps of:

classifying the quantized data into data having a value representing the quantized data and at least one set of classified data representing a data value other than the representative value while obtaining classification information data regarding the classification;

coding the classification information data according to a first coding method; and

obtaining the coded data by coding at least the classified data according to a second coding method, out of the classified data and the data having the representative value.

The Examiner relies on the following prior art:

Kolesnik et al. (Kolesnik)	6,249,614	Jun. 19, 2001
		(filed Mar. 06, 1998)
Nafarieh	6,252,994	Jun. 26, 2001
		(filed Jan. 26, 1998)

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Claims 1-3, 5-12, 14-18, and 20-30 stand finally rejected under 35 U.S.C. § 102(e) as being anticipated by Kolesnik.¹ Claims 4, 13, and 19 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Kolesnik in view of Nafarieh.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Briefs² and Answer for the respective details.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner, and the evidence of anticipation and obviousness relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellant's arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

¹ Although claims 14, 15, 20 and 21 are not included in the statement of this ground of rejection (Answer, page 4), it is apparent that these claims are intended to be included in this rejection as verified by the Examiner's comments in the detailed explanation of the rejection at pages 6-8 of the Answer.

² The Appeal Brief was filed May 22, 2003 (Paper No. 13). In response to the Examiner's Answer dated August 11, 2003 (Paper No. 14), a Reply Brief was filed October 1, 2003 (Paper No. 17), which was acknowledged and entered by the Examiner as indicated in the communication dated July 15, 2004 (Paper No. 18).

It is our view, after consideration of the record before us, that the Kolesnik reference does not fully meet the invention as set forth in claims 1-3, 5-12, 14-18, and 20-30. With respect to the Examiner's 35 U.S.C. § 103(a) rejection, we are also of the view that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as recited in claims 4, 13, and 19. Accordingly, we reverse.

We consider first the rejection of claims 1-3, 5-12, 14-18, and 20-30 under 35 U.S.C. § 102(e) as being anticipated by Kolesnik. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of indecency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

With respect to the appealed independent claims 1, 10, and 16, the Examiner attempts to read the various limitations on the disclosure of Kolesnik. In particular, the Examiner points to the

Figure 1 illustration in Kolesnik as well as the accompanying description beginning at column 1, line 40 of Kolesnik.

Appellant's arguments in response assert a failure of Kolesnik to disclose every limitation in independent claims 1, 10, and 16 as is required to support a rejection based on anticipation.

Appellant's assertions (Brief, pages 5-7; Reply Brief, pages 2-4) focus on the contention that, in contrast to the claimed invention, Kolesnik does not disclose that three types of data are classified following the original quantization of the image data.

After reviewing the Kolesnik reference in light of the arguments of record, we are in general agreement with Appellant's position as expressed in the Briefs. We agree with Appellant that, at best, Kolesnik discloses only two data types, identified by the Examiner as "quantized coefficient matrix" and "quantized reference coefficients," that are classified after the original quantization in unit 110. As pointed out by Appellant (Brief, page 6), to whatever extent the output of the quantization selection unit 115 in Kolesnik may be considered a classification, any such classification does not take place after quantization since quantization has not yet taken place.

We recognize that the Examiner in the responsive arguments portion of the Answer (page 11) offers an alternative

interpretation of the language of claims 1, 10, and 16 which asserts that there is no requirement that the claimed "classification information data," i.e., the third data type, is obtained from the quantized data. After reviewing the claim language in question, we simply find no basis for the Examiner interpreting the claims in this manner. In our view, it is apparent from the plain language of the claims that the claimed "classification information data" must refer to data which has been classified after quantization since the only reference to data classification in the claim language is to post-quantization data.

It is further our view that even assuming, arguendo, that the Examiner's claim interpretation had merit, there is no indication as to how the coding requirements of claims 1, 10, and 16 would be satisfied by Kolesnik. While it is apparent that the "quantized coefficient matrix" value is coded according to at least one coding method which might correspond to the claimed "second coding method," we find no disclosure in Kolesnik that indicates that the "quantized reference coefficient" value, which the Examiner interprets as the claimed "classification information data" is coded at all, let alone by a first coding method as claimed.

In view of the above discussion, since all of the claim limitations are not present in the disclosure of Kolesnik, we do

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not sustain the Examiner's 35 U.S.C. § 102(e) rejection of independent claims 1, 10, and 16, nor of claims 2, 3, 5-9, 11, 12, 14-18, and 20-30 dependent thereon.

Turning to a consideration of the Examiner's 35 U.S.C. § 103(a) rejection of dependent claims 4, 13, and 19 based on the combination of Kolesnik and Nafarieh, we do not sustain this rejection as well. The Nafarieh reference has been added to Kolesnik by the Examiner to address the discrete cosine transform (DCT) features of claims 4, 13, and 19. We find nothing, however, in the disclosure of Nafarieh which would overcome the innate deficiencies of Kolesnik discussed supra.

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In summary, we have not sustained either of the Examiner's rejections of the claims on appeal. Therefore, the decision of the Examiner rejecting claims 1-30 is reversed.

REVERSED

JFR/dal

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